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GRANT NUMBER DAMD17-94-J-4421

TITLE: Breast Cancer Research Training Grant

PRINCIPAL INVESTIGATOR: Adrianne E. Rogers, M.D.

CONTRACTING ORGANIZATION: Boston University Medical Campus
Boston, Massachusetts 02118

REPORT DATE: October 1996

TYPE OF REPORT: Annual

PREPARED FOR: Commander
U.S. Army Medical Research and Materiel Command
Fort Detrick, Frederick, Maryland 21702-5012

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13. ABSTRACT (Maximum 200) The purpose of the program is to train predoctoral students at Boston University Schools of Medicine and Public Health (BUSM, BUSPH) in research into the etiology, prevention, detection, diagnosis and therapy of breast cancer using the most advanced knowledge and techniques available. In addition to providing training in the student's chosen discipline, the program ensures her or his education in other relevant disciplines. Emphasis is placed on interdisciplinary training in Pathology, Epidemiology, and Cell and Molecular Biology. The goal is that, upon completion of the degree in a particular discipline, trainees will be able to work and communicate effectively with other scientists in interdisciplinary approaches to breast cancer research. This is being accomplished through an interdepartmental curriculum, selection of research supervisors whose research is in breast cancer or highly relevant to breast cancer and participation in monthly seminars. Six trainees, two per year, have been selected on the basis of their GPA, GRE scores, letters of recommendation, interviews, and demonstrated ability in and commitment to research, particularly in breast cancer. All six trainees have completed or are completing a practical course in mammary carcinogenesis studies in rats; four have completed their first-year courses and are beginning dissertation research or laboratory rotations; one passed the qualifying examination in June, 1996. The two just admitted are beginning course work. In addition to support from this grant, trainees are supported by tuition and stipend given by BUSM and BUSPH.				
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FOREWORD

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NA In conducting research using animals, the investigator(s) adhered to the "Guide for the Care and Use of Laboratory Animals," prepared by the Committee on Care and use of Laboratory Animals of the Institute of Laboratory Resources, national Research Council (NIH Publication No. 86-23, Revised 1985).

NA For the protection of human subjects, the investigator(s) adhered to policies of applicable Federal Law 45 CFR 46.

NA In conducting research utilizing recombinant DNA technology, the investigator(s) adhered to current guidelines promulgated by the National Institutes of Health.

NA In the conduct of research utilizing recombinant DNA, the investigator(s) adhered to the NIH Guidelines for Research Involving Recombinant DNA Molecules.

NA In the conduct of research involving hazardous organisms, the investigator(s) adhered to the CDC-NIH Guide for Biosafety in Microbiological and Biomedical Laboratories.

 10/16/96
PI - Signature Date

4. Table of Contents

	Page
5. Introduction	<u>5</u>
6. Body	<u>7</u>
7. Conclusions	<u>9</u>
8. References	None
9. Appendix	
a) Group pictures	
b) Notice of name change (Paul Mange)	
c) AACR conference abstract	
Seminars attended by students:	
d) Program on Research in Women's Health and Breast Cancer Working Group Seminars, 1995-1996	
e) Department of Pathology and Laboratory Medicine Seminars, 1995-1996	
f) Cancer Prevention and Control Seminars, 1995-1996	
g) Seminars in Responsible Conduct of Research	

BREAST CANCER RESEARCH TRAINING PROGRAM (BCRTP)

5. INTRODUCTION

Information about breast cancer is increasing rapidly from many sources, but much of it is inconsistent and controversial because of the complexity of the disease and its causes. Difficulties arise also in integration of knowledge and understanding and in extrapolating results between and within scientific disciplines. The Program in Research on Women's Health at Boston University Medical Center (BUMC) has been developed to address some of these problems by serving as an integrating and promoting force for research in women's diseases with a major effort focused in breast cancer research. Through the research and teaching collaborative efforts already in place and with the stimulus of this Training Program the work of investigators at BUMC is being brought to bear on training students to conduct research on breast cancer.

The **PURPOSE** of the Program is to: 1) establish a formal multidisciplinary research and academic training program in breast cancer biology and epidemiology; 2) produce graduates in one discipline (Pathology, Epidemiology, Microbiology) who have an understanding of the other disciplines and who can perform collaborative, multidisciplinary research in the etiology, prevention and therapy of the disease; 3) provide training in cell and molecular biology, experimental pathology, carcinogenesis, epidemiology and biostatistics, immunology, toxicology, and nutrition that will permit trainees to explore: a) basic breast cancer cell processes and interactions, including oncogene regulation, cell signalling, and genetic considerations in design of therapeutic agents; b) questions about etiology, prevention and therapy of breast cancer in laboratory animals and human populations; and c) the integration of knowledge derived from the different approaches; 4) maintain and increase collaborative research in breast cancer and closely related areas among faculty and trainees; 5) provide attractive opportunities for all students and, specifically, for women and underrepresented minorities to pursue careers in breast cancer research. We are promoting the development of young investigators who will have a broad, multidisciplinary background in breast cancer biology and epidemiology and intensive training in a specialized research area and who can perform significant research using advanced concepts and techniques and communicate research accomplishments effectively. They will be a resource to meet future personnel requirements for breast cancer research. The **METHODS** are as follows. Doctoral students committed to cancer research with an interest in breast cancer research are admitted to the Departments of Pathology

and Laboratory Medicine, Epidemiology or Microbiology and follow a curriculum specifically designed for this Training Program. BC RTP ensures that each predoctoral student: 1) participates in an appropriate, integrated curriculum focused on breast cancer; 2) has an advisory committee, composed of basic science and epidemiology faculty members with expertise in or closely related to breast cancer research; 3) participates actively in seminars, and local, regional and national meetings in addition to informal research meetings at the school.

The students are closely integrated into the Breast Cancer Working Group in the Program in Research on Women's Health. The Group comprises over 50 members in multidisciplinary teams collaborating in breast cancer research and developing new research strategies. The Group stimulates research interactions by providing teaching and discussion of clinical and research topics at monthly meetings. The BC RTP is significantly extending and supplementing the doctoral programs in the participating departments. The BC RTP is directed by Adrienne E. Rogers, MD, and Theodore Colton, DSc, with extensive input from Gail Sonenshein, PhD, and Marianne Prout, MD, who direct the Research on Women's Health Program.

Drs. Rogers and Colton meet at least twice each term and take responsibility for all decisions on student admission, performance and training with substantial input from the faculty Trainers and from the Trainees themselves. Because of the relatively small size of the Program and the extensive interactions with faculty in the Women's Health Program, the Admissions and Performance, Recruitment and Seminar Committees proposed have not been needed and, therefore, have not been formally set up.

The trainees are supported annually by the BC RTP and BUSM and BUSPH. The two schools have supplemented the BCRTG so that each student receives a stipend of \$14,000-\$15,000 per year and tuition for 20-24 credits per year as needed. They have been admitted to the Program via the Pathology and Laboratory Medicine or the Biostatistics and Epidemiology Departments. In the beginning of each academic year all new and returning trainees have met with Drs. Rogers and Colton to review the Program and its requirements and opportunities, and to answer questions and plan each student's curriculum. Trainees are encouraged to consult any of the participating faculty for general advice or further discussion of their research interests, and are directed to appropriate faculty by Drs. Rogers and Colton. Trainees have additional contact with faculty members in courses and seminars.

Drs. Rogers and Colton have met also with each trainee at the end of each semester to discuss trainees' academic performance, to obtain feedback about the program and to advise the trainee on choice of courses and lab rotations. When the

students move into their dissertation research, their Faculty Trainer becomes their major adviser, but Drs. Rogers and Colton continue to meet individually with them at least once a year. After passing qualifying exams, trainees' research progress will be reviewed on a regular basis by their dissertation committees, composed of three members from the home department Training Faculty and one member each from the other two departments' Training Faculty. Under appropriate circumstances (need for a particular expertise), one of the committee positions may be filled by non-Trainer faculty from inside or outside BUMC. These committees will meet with the trainee at least twice a year, usually starting within six months of the qualifying exam when the student presents her or his thesis research proposal. Finally, the thesis committee will serve as the examining committee for the thesis defense.

6. BODY

The six students are:

1994: Yvette Cozier (BA, Liberal Arts, Harvard Extension School, 1987; MPH, BUSPH, 1994) was admitted to the Biostatistics and Epidemiology DSc. program. She had extensive laboratory experience in Hematology and in Microbiology (1982-1994), strong letters from faculty and a 3.5 GPA at BUSPH. She was particularly interested in Dr. Lynn Rosenberg's epidemiological studies in breast cancer and other diseases in black women, and has joined Dr. Rosenberg's group for her dissertation research. She is currently completing her SPH course requirements and plans to take the qualifying examination in summer, 1997. Yvette is an African-American.

Laurie Hafer (BS, Microbiology, Penn. State Univ., 1989) was admitted to the Pathology and Laboratory Medicine Program. She had extensive clinical and research experience in the Immunohistochemistry laboratory at the College of Medicine-University Hospital, Hershey, PA, where she was in charge of research and development with a major focus on breast cancer studies. She had very strong letters from faculty who had supervised and worked with her. She entered intending to pursue interests in immunology and breast cancer but has become interested in hormone receptor cellular and molecular biology and is developing her research proposal in that area with Drs. Rogers and Traish. She worked extensively with Drs. Rogers and Delas Morenas last year in histological and immunohistochemical studies of rat mammary tumors and on image analysis of ER & PCNA in them and with Dr. Carol Rosenberg in molecular studies of breast cancer. The specific subject was the methylation status of the TGF β receptor II promoter in breast cancer and other cell lines. She has completed her course requirements and passed the qualifying examination in June, 1996. She participated in the AACR Keystone

workshop on Histopathobiology of Neoplasia in July, 1996, and presented a poster there.

1995. Sylvia Marecki (BS, Microbiology, Univ. N.H., 1995) was admitted by the Pathology and Laboratory Medicine PhD Program and is in the immunology track. She had significant undergraduate research experience and was awarded two competitive research grants in addition to a four-year scholarship. She had very strong letters from her research adviser and other faculty. As we discussed research opportunities in Immunology, her interests shifted to cancer research from her initial focus on bacteriology, which was the subject of her undergraduate research. She is completing her course requirements and will take the qualifying exam in June, 1997. Sylvia did an excellent job in her first lab rotation with Dr. Rogers in the rat DMBA carcinogenesis study, has completed two additional rotations (Dr. Beller: IL-1 defect in autoimmunity; Dr. Wexler: B-cell, costimulation) and is completing a rotation with Dr. Fenton in molecular biological studies of cellular immune responses; she is well-oriented to breast cancer research and plans to work with Dr. Fenton in studies of macrophage function. She was a co-author on Laurie Hafer's poster at the AACR workshop.

Paul Johansen (formerly Mange) (BS Biology, Yale, 1988) was admitted to the Biostatistics and Epidemiology PhD program. This program differs from the DSc program in the SPH in being a more extensive joint program with the Mathematics Dept. on the Charles River Campus of BU and in requiring a more sophisticated mathematics and biostatistics curriculum and dissertation. After completing 1 1/2 years of medical school at Univ. Mass, Paul left to pursue interests in math and statistics and worked in biomedical applications of these areas as Sr. Research Analyst in Psychiatric Epidemiology at the Mass. General Hospital. He had excellent letters from faculty and colleagues. Paul is completing courses required for his program and is teaching in an elementary biostatistics course. He completed the practical carcinogenesis course and is contributing valuable statistical questions and insights to current discussions of Laurie Hafer's studies described above.

Thus a major goal of the program (training and encouraging students in interdisciplinary, collaborative research) is being achieved.

1996 Jackie Ashba (BA, Biology & Economics, Clark University, 1989; MPH, BUSPH, 1992; MA, BUSM, Medical Sciences, 1994) was admitted to the Epidemiology DSc program. Her Masters degree research included studies of both biological and epidemiological aspects of breast cancer. Her academic record here and her letters of recommendation are excellent. She has begun courses and is working in a DMBA mammary carcinogenesis project with Dr. Rogers to begin her practical experience in this field.

Ingrid Gherson (BS, Biology, Binghamton University SUNY) was admitted to the Dept. of Pathology and Laboratory Medicine. Her excellent undergraduate record (GPA 3.5) and GRE scores, strong letters of recommendation and significant technical experience in a pathology laboratory all are evidence of her potential for success in the program. She is working in the DMBA carcinogenesis project with Dr. Rogers and taking her initial courses in biochemistry and epidemiology.

The BCRTTP students participate actively in the practical course in the setting up and running of DMBA mammary tumorigenesis studies under Dr. Rogers' direction. They learn basic methods for such studies, have participated in feeding, weighing and observing the animals and in performing necropsies for examination of tumors and collection of tissues for histological, endocrine and molecular studies. Members of the Pathology faculty introduce them to clinical studies of breast cancer. The subjects specifically covered are: Dr. De las Morenas: basics of breast cancer pathology; Dr. Burke: basics of image analysis, focused on estrogen receptor assay; Dr. Yang and one of the students, Laurie Hafer: basics of immunohistochemistry staining and interpretation; Dr. Rogers: basics of the histopathology of rat mammary gland tumors and discussion of recent research papers.

The students participated in both the Research in Women's Health and the Pathology seminar series and in Breast Cancer Working Group meetings in addition to a variety of other seminars in the two schools and in the Mass. Breast Cancer Research Program. This year the BCRTG hosted two special seminars (Drs. Robert Clarke and Michael Conner). The students had a luncheon and discussion with each of them before the seminar, and also joined other students for discussion with Dr. Lawrence Grossman (announcements attached).

7. CONCLUSIONS

The Program is actively recruiting, attracting and retaining excellent students from diverse backgrounds to focus on breast cancer research. The students are a cohesive group who study and work together well. They interact extensively with Drs. Rogers & Colton and with other students and faculty working in breast cancer research and working in clinical settings with breast cancer. They are doing well in course work and in their initial research. The interdisciplinary focus is strong, fostered by the practical course, the required epidemiology and pathology courses, seminars, and frequent formal and informal meetings of the students with Drs. Rogers and Colton. The students are progressing as expected (or more rapidly than expected) through their course work and into research, a commendable result.

8. References

None

APPENDICES



535

September, 1995: L-R: Paul (Mange)Johansen, Sylvia Marecki, Dr. Colton, Yvette Cozier, Dr. Rogers, Laurie Hafer



September, 1996: L-R: Laurie Hafer, Dr. Rogers, Sylvia Marecki, Paul(Mange) Johansen, Yvette Cozier, Jackie Ashba, Dr. Colton, Ingrid Gherson

Appendix b

Commonwealth of Massachusetts
The Trial Court

Division

Probate and Family Court Department

Docket No. 9600109 CA

Change of Name(s)

Name of Petitioner: PAUL FRANKLIN MANGE

76 WOODS AVENUE SOMERVILLE MIDDLESEX 02144-1119
(Street and No.) (City or Town) (County) (Zip)

Occupation Graduate student in Biostatistics Boston University

Date and Place of Birth January 24, 1966 in Northampton, Massachusetts

Name of Spouse

Occupation

Date and Place of Birth

Names of Minor Children

Reason for change I will be married later this year and my future wife and I would like to take the name of my mother's parents as our family name.

Have parties ever changed their names prior to this petition? NO If answer is yes, explain.

Petitioner(s) pray(s) that his/her/their name(s) be changed as follows:

Names at Present:

Petitioner PAUL FRANKLIN MANGE

Spouse

Child

Child

Child

Child

Date March 1, 1996

To be changed to:

PAUL FRANKLIN MANGE JOHANSEN

Paul Franklin Mange
SIGNATURE OF PETITIONER

SIGNATURE OF SPOUSE

Signature of Minors as signed by father or mother as next friend.

Decree

Notice having been given according to the order of the Court, and no objection being made, it is decreed that the above name(s) be changed as prayed for, which name(s) he/she/they shall hereafter bear, and which shall be his/her/their legal name(s).

Date MAR 20 1996

Sheila E. McLoreson
JUSTICE OF THE PROBATE AND FAMILY COURT

CJ-P 27 (8/88)

MAR 20 1996

Middlesex S.S. _____ 19
Probate Court
A True Copy Certified

[Signature]
Register



Histopathobiology of Neoplasia

"Black Tea and Mammary Carcinogenesis in Rats", Laurie J. Hafer, Yvette S. Iskander, Sylvia Marecki, Adrienne E. Rogers, MD, Boston University School of Medicine and Mallory Institute of Pathology, Department of Pathology and Laboratory Medicine

Evidence of anticarcinogenic effects of diet components has been reported. Extracts of green tea in particular have been shown to prevent or reduce carcinogenicity in the skin, lung, esophagus, forestomach and duodenum of laboratory rodents. Studies of black tea extracts have yielded similar results, but have been less extensive. Breast cancer, a leading cause of morbidity and mortality among women, has also been shown to be susceptible to dietary intake in animal models, particularly intake of unsaturated fats, Vitamin A and selenium. Thus, the question of the effect of tea on mammary carcinogenesis was posed. Since the majority of the tea drinkers in the west consume black tea, the decision was made to examine its effect in rats. Female Sprague-Dawley rats were randomized into either deionized water or tea drinking groups and fed an AIN-76A diet. At 55 days of age, the rats were given a single dose of 7,12-dimethylbenz(a)anthracene (DMBA) by gastric gavage. Rats were palpated twice weekly for tumors and killed by CO₂ inhalation when the tumors reached 3 cm in diameter. The remaining animals were killed 16 weeks post-DMBA administration. Tumor latencies, incidences and numbers were determined for each of the groups. Two experiments were performed using identical protocols except the dose of DMBA which was 25 mg/kg (Expt #1) or 15 mg/kg (Expt #2). Rats were given 1.25% or 2.5% tea extract.

There was no statistically significant effect of black tea on mammary tumor development in either experiment. Ongoing studies are examining the morphological, biochemical, and molecular changes in tissue samples obtained from these animals.

Results:

	<u>Tumor</u> <u>Latency (d)</u>	<u>Tumor</u> <u>Incidence (%)</u>	<u>Tumor</u> <u>Number per TBA^a</u>
<u>Expt#1:</u>			
Control	80	60	2.9+1.7
1.25% Tea	71	75	3.4+2.3
Control	76	62	2.8+1.9
2.5% Tea	72	68	3.2+2.1
<u>Expt#2:</u>			
Control	101	62	2.0+1.2
1.25% Tea	90	40	1.8+1.2
Control	103	45	1.7+0.8
2.5% Tea	98	40	2.0+1.6

^aTBA=Tumor bearing animal

This research is supported by the Tea Trade Health Research Association and USAMRDC Breast Cancer Research Training Grant.



Boston University
School of Medicine


Department of
Pathology and
Laboratory Medicine

80 East Concord Street
Boston, Massachusetts
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TEL: 617 638-4500
FAX: 617 638-4085

Memorandum

DATE: February 14, 1996

TO: Breast Cancer Research Trainees and Mika Sovak, Dong Kim, Anthony Trombino, Koren Mann, Yvette Iskander and Alex Shneider

FROM: Adrienne E. Rogers, M.D. 

RE: Spring Seminar Speakers

The Training Grant is sponsoring two speakers this term in conjunction with the Program in Research on Women's Health. You are invited to have lunch with them and to meet with them for informal discussion. If there are other students in your labs who would be interested to attend, please invite them and let me know.

The speakers are:

Thursday, March 21:

Robert Clarke, Ph.D.

Associate Professor, Lombardi Cancer Center and Dept. of Physiology & Biophysics, Georgetown University

Seminar title: Estrogen regulated genes and acquired endocrine resistance in breast cancer.

Thursday, May 23:

Michael Conner, DVM

Seminar title: Inhibition of farnesyltransferase induces regression of mammary and salivary carcinomas in *ras* transgenic mice.

On March 21, we'll have lunch with Dr. Clarke, 12:00-1:00 in Hiebert Lounge, 14th floor, and then he'll stay on for a discussion with you until about 2:00. His seminar is at 4:00.

On May 23, Dr. Conner will follow the same schedule.

If you can't stay for the discussion but could meet later (or earlier for Dr. Conner), let me know.

cc: Faculty



Program in Research on Women's Health

Interdisciplinary Seminar Series

Current Directions in Research on Women's Health

Cosponsored by the Breast Cancer Research Training Grant

Robert Clarke, Ph.D.

Associate Professor
Lombardi Cancer Center and
Department of Physiology & Biophysics
Georgetown University

"Estrogen Regulated Genes and Acquired Endocrine Resistance in Breast Cancer"

Date: Thursday, March 21, 1996

Time: 4:00 - 5:00 pm

Place: R103

**Inhibition of Farnesyltransferase Induces
Regression of Mammary and Salivary
Carcinomas in *ras* Transgenic Mice**

Dr. Michael W. Conner

**Merck Research Laboratories
Department of Safety**

Date: Thursday, May 23, 1996

Time: 4:00 to 5:00 p.m.

Place: Room R103



PROGRAM IN RESEARCH ON WOMEN'S HEALTH

NEWSLETTER

Issue No. 5

October 1995

Program Seminars

Michael Holick, MD, PhD, Prof. of Med., Chief, Section of Endocrinology, Diabetes & Metabolism at BU Med. Center Hospital & BCH will present a seminar entitled "**New Approaches for Diagnosis and Treatment of Osteoporosis**" on Wed., Nov. 8, 1995 from 3:00 to 4:00 pm in Room L-110. Refreshments will be served.

Dr. David Sherr, Prof. of Environmental Health and Pathology will present on "**The role of the aromatic hydrocarbon receptor in cell growth and death**" on Thursday, Dec. 7, 1995 in R-103 (the McNary Learning Cntr) from 4:00 to 5:00 pm.

Please mark your calendars for future events:

Dr. Stuart Chipkin, Assoc. Prof. of Med., and Director of Clinical Endocrinology, Diabetes and Metabolism will moderate a discussion on **Obesity** on Tues., Jan. 16, 1996 from 3:00 to 5:00pm. Room to be announced.

As part of the Commonwealth of Massachusetts Course on Breast Cancer, **Dr. Susan Faqua**, University of Texas Science Center, will present on **estrogen receptor mutations and receptor variance in breast cancer** on Thurs., Feb. 22, 1996 in Atrium C/D Conf. room at 4:00 pm. A reception follows in Function Room A.

Dr. Robert Clarke, the Lombardi Cancer Res. Center, Georgetown, will give a seminar on Thurs., **March 21, 1996** & **Dr. Mike Connors** of Merck Labs. will present a seminar on Thurs. **May 23rd**. Both lectures will be held in R103 from 4:00 to 5:00 pm.

On Thurs. June 20, 1996, **Dr. Phil Stubblefield**, Prof. and Chairman of Dept. of Obstetrics and Gyn., BU Sch. of Med., Dir., Obstetrics and Gyn., BCH, Chief, Dept. of Gynecology, BUMCH will present a seminar on **contraception**.

Seminars/Lectures

Dr. Carol Rosenberg will be presenting on "**Early**

Genetic Change in Breast Disease" as part of the Pathology & Lab. Med. Dept. seminar series on Fri., Nov. 17 at 1:15 pm in room L301.

Working Groups

The Breast Cancer Working Group will meet on Thursdays at 4:00 pm in Med/Dent Sci conf. rm (L-317). On Oct. 26th, **Mika Sovak**, MD/PhD candidate will present her work on "**Transcription Factors in Breast Cancer**". **Dr. Marc Hansen** will give the next presentation on Nov. 30th on "**Issues and analysis of the BRCA-1 gene**".

Other News

This term's Special Topics in Path. course is on **Grant Writing**. PhD students are writing applications on aspects of research in breast cancer. Interested volunteers to review 1-3 applications for Spring term study section, please send info. on expertise, phone, and fax to Dr. Adrienne Rogers (L-804, Fax 8-4085).



PROGRAM IN RESEARCH ON WOMEN'S HEALTH

NEWSLETTER

Issue No. 6

February 1996

Upcoming Seminars

Suzanne Fuqua, PhD, Univ. of Texas Health Science Center will speak on **"The Role of Estrogen Receptor Variants in Breast Cancer Evolution"** on Thurs., Feb. 22 from 4-5pm in Atrium C/D. A reception will follow in Function Rm A. This event is co-sponsored by the Mass. Course on Breast Cancer.

Robert Clarke, PhD of the Lombardi Cancer Res. Center, will speak on: **"Estrogen Regulated Genes and Acquired Endocrine Resistance in Breast Cancer"** on Thurs., March 21, in R103 from 4-5pm.

Lawrence Grossman, PhD, Johns Hopkins School of Public Health, will present on **"DNA Repair as a Biomarker for Cancer Epidemiology Studies"**. Co-sponsored by the Biochem. Dept., this seminar will be held on Mon., May 13, from 4-5pm in Room L112.

Good News...

Three Breast Cancer Working Group members were awarded 1996 Commonwealth of Mass. Breast Cancer Research Awards. The award winners were: **Ken Santora, Ph.D. candidate** (Pathology Dept.): **"Generation of Polyclonal Antibody Libraries for Breast Cancer Therapy"**.

David Seldin, MD, PhD (Dept. of Hematology/Oncology): **"Casein Kinase II in Multistep Mammary Tumorigenesis"**.

Mika Sovak, MD, PhD candidate (Dept. of Pathology): **"Role of NF- κ B/Rel in the Etiology of Breast Cancer"**.

Breast Cancer Working Group

The working group will hear two presentations on award-winning projects in upcoming meetings: **Jackie Sharon, PhD**, Dept. of Pathology & Lab. Med.

will present on:

"Polyclonal Antibody Libraries for Cancer Treatment", Thurs., Feb. 29, from 4-5pm in room **K-225**.

Dave Seldin, MD, PhD, will speak on **"Transgenic Mouse Models of Breast Cancer"**, Thurs., March 28, from 4-5pm in room **K-225**.

Note the room change inspired by a large turnout at the last meeting.

New Working Group

The **Obesity Symposium**, moderated by Dr. Stuart Chipkin attracted a grand audience with stimulating discussion. Interested P.I.'s have organized an ongoing working group which meets every other Wednesday from 10-11am in Room E210.

The next meeting is scheduled for Feb. 28th. Please contact Dr. Barbara Corkey at x8-7091 for more info.



Program in Research on Women's Health

Interdisciplinary Seminar Series

Current Directions in Research on Women's Health

Cosponsored with the Department of Biochemistry

SEMINAR

Lawrence Grossman, Ph.D.

University Distinguished Service Professor

Department of Biochemistry

The Johns Hopkins University School of Hygiene and
Public Health

DNA Repair as a Biomarker for Cancer Epidemiology Studies

Monday, May 13, 1996

4:00 p.m., Room L-112

Coffee and Tea will be served at 3:30 p.m. in the Biochemistry
Conference Room (K-225)



Boston University
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Research on
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Gail E. Sonenshein, Ph.D.
Director
Marianne Prout, M.D., M.P.H.
Associate Director

DATE: April 24, 1996

TO: Members of the Breast Cancer Working Group, Members of the Obesity Group, Drs. Michael Holick and Barbara Millen

FROM: Drs. Marianne Prout and Gail Sonenshein

RE: The next working group meeting

The next working group meeting will be held on:

Thursday, May 2, 1996
4:00 - 5:00pm
Room K-225

Topic: Discussion of projects which could be proposed for Program Project in Nutrition and Basic Biology Research for Cancer Prevention (RFA: CA-96-005), due July 19, 1996.

Organizer: Dr. Adrienne Rogers. Enclosed are her suggestions for focus of proposal.

**Massachusetts Department of Public Health
1995-96 Breast Cancer Research
Lecture Series**

<u>Speaker</u>	<u>Location</u>	<u>Date/Time</u>	<u>Topic</u>
Dr. Minna Bissel Director, Life Sciences Lawrence Berkeley National Laboratory	Tufts Medical School Sackler Auditorium A	August 9, 1995 4:00 PM (reception follows)	"Extracellular Matrix as a Central Switch in Gene Expression Apoptosis and Cancer"
* Dr. V. Craig Jordan, Director Breast Cancer Research Northwestern Medical School	Boston University Medical Center	September 28, 1995 4:00 PM (reception follows)	"The World Turned Upside Upside Down": "Transfection of the ER Gene Into Breast Cancer Cells"
Dr. Paolo Toniolo Dept. of Environmental Medicine N.Y. University School of Medicine	Tufts Medical School Sackler Auditorium B	October 19, 1995 4:00 PM (reception follows)	"Endogenous Hormones in Breast Cancer"
Dr. Sara Sukumar Dept. of Oncology John's Hopkins School of Medicine	Tufts Medical School	November 29, 1995 4:00 PM (reception follows)	"Preventional Breast Cancer by Novel Gene Mediated Strategies"
Dr. David Blask Bassett Research Institute Cooperstown, NY	Univ. of Mass. Medical Center (Grand Rounds)	January 18, 1996 12:00 noon (luncheon follows)	"The Hormone of Darkness Sheds New Light on Breast Cancer"
Dr. Susan Faqua <i>Dr. Faqua</i> Dept. of Oncology University of Texas Health Science Center	Boston Univ. Medical Center Atrium C/D	February 22, 1996 4:00 PM (reception follows) Function Room A	Estrogen Receptor Variants & Breast Cancer
* Expert Panel (pro & con) Dr. Kathy Hetzlouer Johns Hopkins University Dr. Marianne Prout Boston University Medical School	Harvard School of Public Health Kresge, Synder Auditorium	March 13, 1996 2:00 - 4:00 PM (reception follows) Room 110	Current Issues on Tamoxifen for Chemoprevention of Breast Cancer
<u>Speaker</u>	<u>Location</u>	<u>Date/Time</u>	<u>Topic</u>
* Third Annual Massachusetts Breast Cancer Research Symposium	Galleria Conference Center Longwood Medical Area	April 17, 1996 9:00 AM - 5:00 PM	1995 Breast Cancer Research Awardees Present Research Results
Dr. Robert Callahan National Cancer Institute	Mass. General Hospital Cancer Center	May 8, 1996 Noon (luncheon follows)	"Genetic Alterations & Breast Cancer"
Dr. Robert Strange Univ. of Colorado Medical Center	Mass. General Hospital	June 1996	"Apoptosis and Breast Cancer"

* students, faculty attended

Department of Appendix e

PATHOLOGY

 and Laboratory Medicine



Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118-2394

PATHOLOGY SEMINARS, FALL TERM 1995
FRIDAYS, 1:15-2:30
ROOM L301, REFRESHMENTS AT 1:00

September

- | | |
|---|---|
| 22 Dr. John Tilley
Vincent Center for Reproductive Biology
Massachusetts General Hospital | <i>Intracellular effectors of the ovarian cell death pathway.</i> |
| 29 Dr. Levon Khachigian
Department of Pathology
Brigham & Women's Hospital | <i>Regulation of platelet derived growth factor gene expression in endothelial cells.</i> |

October

- | | |
|---|---|
| 6 Dr. Daniel Wright
Department of Medicine | <i>Basic studies of the regulation of myelopoiesis.</i> |
| 13 Dr. Stephen Farmer
Department of Biochemistry | <i>Transcriptional control of adipogenesis and energy metabolism.</i> |
| 20 Kent Chen
Department of Pathology & Laboratory Medicine | <i>Oxidative stress in atherosclerosis.</i> |

Special Seminar - Room: L110

- | | |
|---|--|
| 27 Dr. Marjorie Lees
Eunice Kennedy Shriver Center
for Mental Retardation
Harvard Medical School | <i>Myelin proteolipid protein: physiology and pathology.</i> |
|---|--|

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over⇒

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Department of
PATHOLOGY
 and Laboratory Medicine



Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118-2394

PATHOLOGY SEMINARS, SPRING TERM 1996
FRIDAYS, 1:15-2:30
ROOM L301, REFRESHMENTS AT 1:00

FEBRUARY

- | | |
|--|---|
| 9 Ken Santora
Department of Pathology & Laboratory Medicine | Combinatorial antibody libraries from chickens. |
| 16 Dr. Shyr-Te Ju
Department of Medicine &
Pathology & Laboratory Medicine | Gene regulation in activation-induced T cell death. |
| 23 Dr. Abdulmaged Traish
Department of Biochemistry & Urology | Pathophysiology of impotence. |

MARCH

- | | |
|--|---|
| 1 Koren Mann
Department of Pathology & Laboratory Medicine | Mechanisms of polycyclic aromatic hydrocarbon-induced immunotoxicity. |
| 8 SPRING RECESS | |
| 15 Gino DiSciullo
Department of Pathology & Laboratory Medicine | Studies of lymphocyte transmigration. |
| 22 John Pak
Department of Pathology & Laboratory Medicine | Moloney murine leukemia virus activates NF- κ B. |
| 29 GRADUATE STUDENT RESEARCH DAY | |

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Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118-2394

PATHOLOGY SEMINARS, FALL TERM 1996

FRIDAYS, 1:15-2:30

ROOM L301, REFRESHMENTS AT 1:00

September

20 **Alexander Urbano**

Department of Pathology & Laboratory Medicine

Identification of novel endonucleases in drug-induced apoptosis of human leukemia.

27 **Jennifer Cermak**

Department of Pathology & Laboratory Medicine

The availability of dietary choline during pregnancy alters the brain development of offspring.

OCTOBER

11 **Dr. Joseph Loscalzo**

Cardiovascular Institute and Department of Medicine

Nitric oxide and homeostasis.

18 **Dr. Vasilis Zannis**

Departments of Medicine and Biochemistry

Apolipoprotein E and its role in the pathogenesis of cardiovascular disease and Alzheimer's disease.

20-22 **Whitehead Institute Symposium at MIT Cancer (Graduate Students encouraged to attend)**

25 **Ken Matsui**

Department of Pathology & Laboratory Medicine

Proteasome regulation of Fas ligand.

NOVEMBER

1 **Dr. David Seldin**

Department of Medicine & Microbiology

Oncogenes and anti-oncogenes to model lymphomagenesis in transgenic mice.

8 **Dr. James Hamilton**

Department of Biophysics

Detection of crystalline cholesterol and other lipids in atherosclerotic plaques by new NMR methods.

15 **Nick Husni**

Department of Pathology & Laboratory Medicine

Cytokines and the diabetic fibroblast: Implications for wound healing in patients with diabetes mellitus.

22 **Dr. Ilana Gozes**

Department of Clinical Biochemistry
Sackler School of Medicine

Neuropeptide-related drug development against neurodegeneration.

29 **HOLIDAY**

DECEMBER

6 **Amy Williams**

Department of Pathology & Laboratory Medicine

Transcriptional regulation of platelet-derived growth factor.

13 **Dr. Gerhard Heinrich**

Department of Biomolecular Medicine

Zebrafish neurotrophins and trks.

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Cancer Prevention and Control Grand Rounds

Boston University Medical Center
Evans Seminar Room
First Floor, Evans Building*
Noon—1 p.m.

**note change in location from previous year's seminars*

.....
Friday, September 29, 1995

"Can Tamoxifen Prevent Breast Cancer?"

Dr. Marianne Prout
Associate Professor of Public Health and Surgery
Boston University School of Medicine/
School of Public Health

.....
Friday, November 17, 1995

*"Cancer Prevention at the Worksite:
The Working Well Trial"*

Dr. Glorian Sorenson
Director of Community-based Research
Dana Farber Cancer Institute;
Associate Professor of Public Health
Harvard University

.....
Friday, October 27, 1995

*"Suing the Tobacco Industry: A Good Cancer
Prevention Strategy?"*

Professor Richard Daynard, JD
Northeastern Law School;
Director, Tobacco Product Liability Project

.....
Friday, December 15, 1995

*"Controlling Chemotherapy-induced Nausea
and Vomiting"*

Dr. Paul Hesketh
Chief of Medical Oncology
St. Elizabeth's Medical Center;
Professor of Medicine
Tufts University School of Medicine

Please Post
Lunch will be provided
1.2 hours Nursing CEUs
Physician CMEs

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Cancer Prevention & Control Grand Rounds



Boston University Medical Center

Evans Seminar Room / Noon - 1 p.m.

Please Post

Friday, February 2, 1996

"The Control of Chemotherapy - Induced Nausea and Vomiting"

Dr. Paul Hesketh, Chief of Medical Oncology,
St. Elizabeth's Hospital
Professor of Medicine,
Tufts University School of Medicine

Friday, March 1, 1996

"Can Aspirin Prevent Colorectal Cancer?"

Dr. Ed Giovannucci, Assistant Professor,
Harvard Medical School

Friday, April 12, 1996

"Genetic Testing for Cancer: The Future Impact on Public Health"

Philip Reilly, MD, JD,
Executive Director, Shriver Institute

Friday, May 17, 1996

"Cigarette Advertising in Kids: Can We Compete with Joe Camel?"


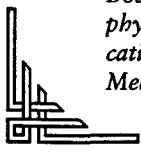
Dr. Mike Siegel, Research Associate,
Boston University School of Public Health

❖ Lunch will be provided ❖

1.2 hours Nursing CEUs / Physician CMEs



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Cancer Prevention & Control Grand Rounds



Boston Medical Center

Evans Seminar Room / Evans Building / Noon - 1 p.m.

Please Post

Friday, September 27, 1996

"Special Challenges in Breast Cancer Screening and Treatment in the Inner-city"

Rita Blanchard, MD, Associate Professor of Medicine,
Boston University Medical Center

Discussants:

Robert Beazley, MD, Professor of Surgery, Chief,
Section of Surgical Oncology, Boston University Medical Center

Marianne Prout, MD, MPH, Associate Professor of Public Health and Surgery,
Boston University Schools of Public Health and Medicine

Friday, October 18, 1996

"Vitamins and Cancer Prevention: What Should Clinicians Know?"

Donald Miller, ScD, Assistant Professor,
Public Health and Dermatology, Boston University Medical Center

Discussant:

David Battinelli, MD, Director of Housestaff Education,
Boston University Medical Center

Friday, November 22, 1996

"Current Approaches to Colorectal Screening"

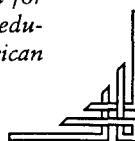
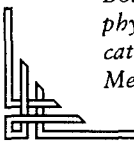
Robert H. Fletcher, MD, MSc, Professor,
Harvard Medical School

❖ Lunch will be provided ❖

1.2 hours Nursing CMEs / Physician CMEs

**BOSTON
MEDICAL**
CENTER

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C A N C E R

Kresge Auditorium
Massachusetts Institute of Technology
Cambridge, Massachusetts

1996

Sunday, October 20

KEYNOTE SPEAKERS

8:00 pm–10:00 pm

Robert A. Weinberg
Richard Peto

Monday, October 21

ORIGINS

9:00 am–12:30 pm

Chairperson: Albert de la Chapelle
Tom Petes
Yosef Shiloh
Alexander Kamb
Richard Klausner

MECHANISMS

2:00 pm–5:30 pm

Chairperson: Guillermina Lozano
David Beach
Carol W. Greider
Charles J. Sherr
Eileen P. White

Tuesday, October 22

PROGRESSION

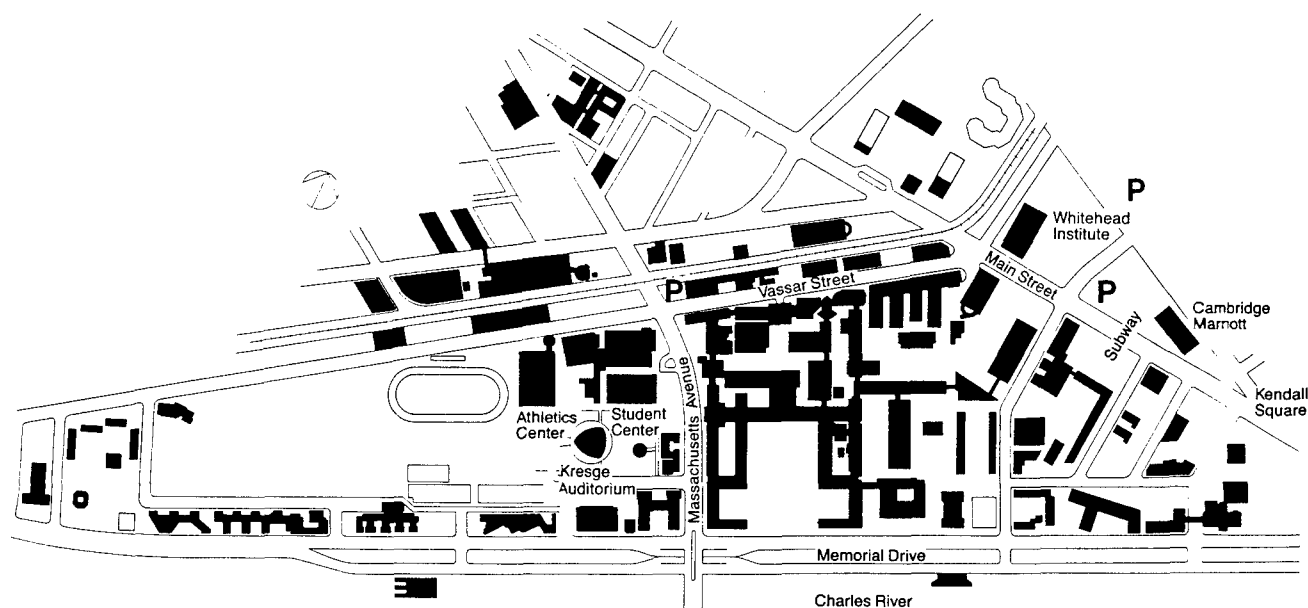
9:00 am–12:30 pm

Chairperson: Jerry Adams
Douglas Hanahan
Anton Berns
Allan Balmain
Bert Vogelstein

THERAPY AND DIAGNOSTICS

2:00 pm–5:30 pm

Chairperson: Judah Folkman
Allen I. Oliff
Frank McCormick
David Sidransky
Thomas Waldmann





PRESENT THE 1996 SERIES ON

the Appendix g

RESPONSIBLE CONDUCT of RESEARCH

BOSTON
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SCHOOL OF
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MEDICAL
SCIENCES

Basic Rules and Policies

Research Involving Human Subjects

Leonard Glantz, J.D.

Professor of Public Health and Socio-Medical Sciences and Community Medicine, Co-Author of *Informed Consent to Human Experimentation: The Subject's Dilemma* and of *Children as Research Subjects: Science, Ethics & Law*.

The Boston University Policy on Scientific Misconduct

Michael Rosen, J.D.

Associate General Counsel, Boston University; Co-Author, *Boston University's Policies and Procedures Concerning Allegations of Misconduct in Scholarship and Research*.

The Scientific Use of Animals: A Changing Arena

Special Guest Speaker

Peter Theran, V.M.D.

Vice-President, Hospital Division and Director of Laboratory Animal Welfare,
Massachusetts Society for the Prevention of Cruelty to Animals/American Humane Education Society.
Member, National Research Council Committee for Long Term Care of Chimpanzees in Research.
Director of BUSM Laboratory Animal Science Center, 1966-1989.

Wednesday, September 18, 1996
3-5 pm in Room L-110

Attendance is required for pre- and post-doctoral trainees.

and please mark your calendars for..

Wednesday, October 23, 3-5pm in L-110
for a Presentation on Case Studies in Research Ethics



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GRADUATE
MEDICAL
SCIENCES

PRESENT THE 1996 SERIES ON

the RESPONSIBLE CONDUCT *of* RESEARCH

A Case Study on Ethical Conduct in the Lab...

You, a graduate student, are writing a paper on the regulation of IL-2 in sarcoidosis.

Your colleagues are:

A pulmonary fellow who obtained transbronchial biopsies and lung lavage fluids from the patients,

A colleague who analyzed the biopsy specimens by in situ hybridization to localize the sites of IL-2 expression,

Another colleague who has collected longitudinal epidemiologic data on the patient population of interest.

Your technician, who has performed several hundred protein assays and ELISAs for IL-2.

All contributed data and material to the paper.

- *Should the technician be an author?*
- *Should the senior scientist in whose lab you are working be an author?*
- *Should the Professor of Medicine at the University of Illinois, from whom you got the highly specific IL-2 antibody be an author?*
- *Your epidemiologist colleague was off in Canada fly-fishing at the time you finished the manuscript and sent it off to the Journal of Biological Chemistry. She returns from her vacation, reads the accepted manuscript, and is furious because she disagrees with the conclusions. What do you do?*
- *What constitutes authorship?*

Discussants:

Ronald Corley, Ph.D., Professor and Chairman, Microbiology

Elizabeth Simons, Ph. D., Professor of Biochemistry

Geoffrey Chupp, M.D., Pulmonary Fellow

Caroline Fisher, M.D., Ph.D. Candidate, '99 (Pharmacology)

Moderator:

Leonard Glantz, J.D., Professor of Public Health

*Wednesday, October 23, 1996
Room L-110, 3:00-5:00 p.m.*

Attendance is required for pre- and post-doctoral trainees.